

1 Claims 1-45 are pending and are listed below:

2
3 1. (ORIGINAL) A method of providing a user interface (UI)
4 comprising:

5 rendering a DHTML document from an XML document using at least one
6 XSLT transformation (XSL-T); and

7 presenting a user interface based, at least in part, on the XSL-T that was
8 used to render the DHTML document.

9
10 2. (ORIGINAL) The method of claim 1, wherein said presenting
11 comprises automatically presenting the user interface.

12
13 3. (ORIGINAL) The method of claim 1, wherein the user interface
14 comprises a context block.

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16 4. (ORIGINAL) The method of claim 1, wherein the user interface
17 comprises an in-document user interface.

18
19 5. (ORIGINAL) The method of claim 1, wherein the user interface
20 comprises an accelerator.

21
22 6. (ORIGINAL) The method of claim 1, wherein the user interface
23 comprises one or more of the following: a context block, an in-document user
24 interface, and an accelerator.
25

1 7. **(ORIGINAL)** The method of claim 1, wherein the presenting
2 comprises deciding which user interface to present from a number of user
3 interfaces.

4
5 8. **(ORIGINAL)** The method of claim 7, wherein deciding comprises:
6 ascertaining a user's actions within a document; and
7 presenting a user interface based on the ascertained user's actions.

8
9 9. **(ORIGINAL)** One or more computer-readable media having
10 computer-readable instructions thereon which, when executed by a computer,
11 implement the method of claim 1.

12
13 10. **(ORIGINAL)** A method of providing a user interface comprising:
14 considering multiple parameters one of which includes an XSL-T file; and
15 based upon the considered parameters, rendering a user interface sufficient
16 to enable a user to interact with a DHTML view that has been rendered by the
17 XSL-T file from an XML document.

18
19 11. **(ORIGINAL)** The method of claim 10, wherein one parameter
20 comprises a user location within a particular document.

21
22 12. **(ORIGINAL)** The method of claim 10, wherein one parameter
23 comprises a portion of an XML schema that corresponds to a user's selection.

24
25 13. **(ORIGINAL)** The method of claim 10, wherein one parameter
comprises one or more UI types that would be desirable to generate.

1
2 **14. (ORIGINAL)** The method of claim 10, wherein the parameters
3 comprise:

4 a user location within a particular document;

5 a portion of an XML schema that corresponds to a user's selection; and

6 one or more UI types that would be desirable to generate.
7

8 **15. (ORIGINAL)** The method of claim 10, wherein the considering of
9 the multiple parameters comprises considering one or more constructs within an
10 XSL-T file.
11

12 **16. (ORIGINAL)** The method of claim 10, wherein the considering of
13 the multiple parameters comprises identifying from multiple user interfaces which
14 user interfaces are more suited to have their functionalities provided by an in-
15 document user interface.
16

17 **17. (ORIGINAL)** The method of claim 10 further comprising
18 modifying structure of the XML document based upon the user engaging the user
19 interface.
20

21 **18. (ORIGINAL)** The method of claim 10, wherein the user interface
22 comprises an in-document user interface.
23

24 **19. (ORIGINAL)** One or more computer-readable media having
25 computer-readable instructions thereon which, when executed by a computer,
implement the method of claim 10.

1
2 **20. (ORIGINAL)** A method of providing a user interface comprising:
3 making a selection in a DHTML view;
4 determining, based upon the selection, a corresponding selection in an
5 XML document;
6 determining, based upon the corresponding selection in the XML
7 document, a corresponding portion of an XML schema;
8 determining, based upon the XML schema portion, one or more types of
9 action that can be undertaken;
10 producing one or more operations that can be undertaken for various
11 determined action types; and
12 determining, from an XSL-T file that rendered the DHTML view, a user
13 interface type that can be displayed for a user and used to implement the one or
14 more operations.

15
16 **21. (ORIGINAL)** The method of claim 20, wherein the making of the
17 selection comprises moving a cursor to a particular area within a document.

18
19 **22. (ORIGINAL)** The method of claim 20, wherein the action types
20 correspond to ways in which a user might manipulate a portion of a document they
21 have selected.

22
23 **23. (ORIGINAL)** The method of claim 20, wherein the user interfaces
24 comprise in document user interfaces.

1 **24. (ORIGINAL)** The method of claim 20 further comprising
2 displaying an in-document user interface of a determined interface type for the
3 user.

4
5 **25. (ORIGINAL)** The method of claim 24 further comprising
6 manipulating structure of the XML document based upon user input through the
7 displayed user interface.

8
9 **26. (ORIGINAL)** One or more computer-readable media having
10 computer-readable instructions thereon which, when executed by a computer,
11 implement the method of claim 20.

12
13 **27. (ORIGINAL)** A method of manipulating an XML document
14 comprising:

15 defining one or more crystals, each of which containing one or more
16 behaviors and an XSLT transformation for transforming an XML document into a
17 DHTML view;

18 using the one or more crystals to render a DHTML view from an XML
19 document;

20 enabling user interaction with the DHTML view; and

21 mapping, via the one or more behaviors, user interactions in the DHTML
22 view to the XML document.

23
24 **28. (ORIGINAL)** The method of claim 27, wherein the one or more
25 behaviors are data-shape dependent.

1 29. (ORIGINAL) The method of claim 27, wherein the one or more
2 behaviors are data-shape dependent on a data shape defined by the XML
3 document.

4
5 30. (ORIGINAL) The method of claim 27, wherein the one or more
6 behaviors are configured to function independently of an XML schema of which
7 the XML document is an instance.

8
9 31. (ORIGINAL) The method of claim 27, wherein the one or more
10 behaviors are configured to function independently of XML tags that might be
11 used.

12
13 32. (ORIGINAL) The method of claim 27, wherein the behaviors are
14 implemented as binary code.

15
16 33. (ORIGINAL) The method of claim 27, wherein the crystals are
17 reusable across different XML documents.

18
19 34. (ORIGINAL) One or more computer-readable media having
20 computer-readable instructions thereon which, when executed by a computer,
21 implement the method of claim 27.

22
23 35. (ORIGINAL) One or more computer-readable media having
24 computer-readable instructions thereon which, when executed by a computer,
25 cause the computer to:

1 provide multiple crystals, each of which containing one or more behaviors
2 and an XSLT transformation for transforming an XML document into a DHTML
3 view;

4 use one or more of the crystals to render a DHTML view from an XML
5 document;

6 attach at least one behavior to at least one DHTML tag;

7 ascertain that a user has interacted with a DHTML view associated with the
8 at least one DHTML tag; and

9 use the behavior associated with the at least one DHTML tag to map a user
10 interaction back to the XML document and make associated structural changes in
11 the XML document.

12
13 36. (ORIGINAL) The one or more computer-readable media of claim
14 35, wherein the behaviors are implemented as binary code.

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16 37. (ORIGINAL) The one or more computer-readable media of claim
17 35, wherein the behaviors are data shape dependent.

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19 38. (ORIGINAL) The one or more computer-readable media of claim
20 35, wherein the behaviors are not dependent upon an XML schema.

21
22 39. (ORIGINAL) A method of manipulating an XML document
23 comprising:

24 associating one or more behaviors with a DHTML tag in a DHTML view
25 that has been rendered from an XML document; and

1 responsive to a user interacting with a DHTML view associated with the
2 DHTML tag, using the one or more behaviors to map user interactions to the XML
3 document and effect structural changes on the XML document.

4
5 40. (ORIGINAL) The method of claim 39, wherein the one or more
6 behaviors are data shape-dependent.

7
8 41. (ORIGINAL) The method of claim 39, wherein the one or more
9 behaviors are data shape-dependent, the data shape being defined by the XML
10 document.

11
12 42. (ORIGINAL) The method of claim 39, wherein the one or more
13 behaviors are independent of any XML schema.

14
15 43. (ORIGINAL) The method of claim 39, wherein the one or more
16 behaviors are independent of data values.

17
18 44. (ORIGINAL) The method of claim 39, wherein the one or more
19 behaviors are independent of one or more of: (a) any XML schema and (b) data
20 values.

21
22 45. (ORIGINAL) A software structure embodied on a computer-
23 readable medium comprising one or more crystals, each of which containing at
24 least one behavior and XSL-T for rendering XML into DHTML, the behaviors
25 being data shape dependent and being configured for use with common data
shapes independent of any XML schema.